

Product Data - UHMW (Virgin)



Product characteristics

- High abrasion and wear resistance
- Low coefficient of friction
- High impact strength

Product applications

- Beverage and food industry
- Mechanical engineering
- Packaging industry

Typical Properties

Property	Test Method	Units	Values
PHYSICAL			
Density	DIN EN ISO 1183-1	g/cm ³	>0.93
Water absorption	DIN EN ISO 62	%	<0.01
Flammability (Thickness 3 mm / 6 mm)	UL 94	10 ⁶ g/mol	~9
Molecular weight	-		HB
MECHANICAL			
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	>650
Notched impact strength	DIN EN ISO 179	kJ/m ²	>100
Shore hardness	DIN EN ISO 868	ScaleD	>63
THERMAL			
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	80
Melting temperature	ISO 11357-3	°C	130...135
Thermal conductivity	DIN 52612-1	W / (m*K)	0.40
Thermal capacity	DIN 52612	kJ / (kg*K)	1.90
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	150 - 230
Service temperature, long term	Average	°C	-250 ... 80
Service temperature, short term (max)	Average	°C	130
ELECTRICAL			
Dielectric constant	IEC 60250		2.3
Dielectric dissipation factor (10 ⁶ Hz)	IEC 60250		0.0001
Volume resistivity	DIN EN 62631-3-1	Ω * cm	>10 ¹⁴
Surface resistivity	DIN EN 62631-3-2	Ω	>10 ¹⁴
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	>40

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